

REMARKS

Claims 1-65 are pending in this application in which Claims 1-19, 31-49 and 61-64 are withdrawn from further consideration. The Examiner rejected Claims 20, 29, 30, 50, 59, 60, and 65 under 35 U.S.C. 103(a) and indicated that Claims 21-28, and 51-58 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Thelen, Yamada, or Brotman Do Not Show or Suggest the Invention of Claims 20, 29, 30, 50, 59, 60, and 65

The Examiner rejected Claims 20, 29, 30, 50, 59, 60, and 65 under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 6,526,380 to Thelen et al. ("*Thelen*") in view of U.S. Patent No. 5,797,116 to Yamada et al. ("*Yamada*") and U.S. Patent No. 6,236,967 to Brotman et al. ("*Brotman*"). This rejection is traversed for the reasons discussed below.

Claim 20

The Examiner contended that the claimed statistically hierarchized databases are disclosed at Column 6, line 66 to Column 7, line 2, and Column 8, line 54 to Column 9, line 32 of *Thelen*. However, the claimed statistically hierarchized databases are explicitly required to be such that the lower level statistically hierarchized database contain an increasingly larger part of the retrieval key candidates and that the lowest level statistically hierarchized database contains all the retrieval key candidates. An example of such statistically hierarchized databases is shown in Fig. 10 of the present specification, where all retrieval key candidate data that are contained in the highest level statistically hierarchized database are contained in the second level statistically hierarchized database. The second level statistically hierarchized database also contains additional retrieval key candidate data so that the second level statistically hierarchized database contains more data than the highest

level statistically hierarchized database, and so on. The lowest level statistically hierarchized database contains all of the retrieval key data.

It takes longer to carry out the speech recognition processing with respect to a lower statistically hierarchized database than a higher statistically hierarchized database because the lower statistically hierarchized database is larger in size compared with the higher statistically hierarchized database. The present invention takes advantage of this size difference by determining the attribute values without making the user conscious of the time required for the speech recognition processing and the retrieval, and without causing unnatural dialogues with the user due to incompleteness of the speech recognition processing. When the speech recognition processing is completed for the statistically hierarchized database at the highest level, the recognition retrieval key leading candidates are selected for the highest level, and a next speech dialogue with the user is carried out depending on the number of the selected recognition retrieval key leading candidates for the highest level, while the speech recognition processing for the lower level statistically hierarchized databases is carried out in parallel. In this way, the speech dialogue with the user can be carried out smoothly, and it is possible to narrow down the recognition target words that can return a response with a tolerable level of accuracy for the user without making the user wait (see Page 16, line 19 to Page 22, line 35 of the present specification).

In contrast, *Thelen* describes recognition models that are hierarchically arranged from models with a more generic context to models with a more specific context, i.e., the hierarchical models are hierarchically arranged in an order of their conceptual levels of generality as shown in Fig. 4 (see Column 8, line 54 to Column 9, line 32 of *Thelen*). However, these recognition models are not "statistically hierarchized" in a sense that each recognition model contains different recognition target words. In *Thelen*, not all data contained in the highest level recognition model are contained in the second level recognition model. The second level recognition model does not necessarily contain a larger number of data than the highest level recognition model, and the lowest level recognition model does not contain all of the recognition target data. Thus, *Thelen* fails to teach or suggest storing

retrieval key candidates that constitute a number of data that cannot be processed by the speech recognition processing in a prescribed processing time as recognition target words, in a plurality of statistically hierarchized databases provided in a speech recognition database, where lower level statistically hierarchized databases contain an increasingly larger part of the retrieval key candidates such that a lowest level statistically hierarchized database contains all the retrieval key candidates.

The Examiner admitted that *Thelen* fails to disclose controlling a next speech dialogue with the user according to whether a prescribed condition is satisfied or not, but contended that this feature is disclosed in Column 8, lines 18-54 of *Yamada*. *Yamada* describes that an acceptable vocabulary or sentence is subsequently changed on the basis of the result in step S5, by adding the spa site names resulting in step S5 to the acceptable vocabulary (see Column 8, lines 32-36), which only changes which words are included in the acceptable vocabulary. *Yamada* fails to teach or suggest controlling the next speech dialogue with the user based on a prescribed condition. Thus, *Yamada* fails to disclose step (d) of Claim 20.

Accordingly, Claim 20 would not have been obvious to one of ordinary skill from *Thelen*, *Brotman*, and *Yamada* at the time the Applicants made the claimed invention. Accordingly, Claim 20 should be allowed.

Claims 21- 30, 50, 59, 60, and 65

Claims 21-30 depend from independent Claim 20. The remarks made above in support of patentability of independent Claim 20 are equally applicable to distinguish the dependent claims from the cited references.

Claims 50, 59, 60, and 65 contain similar limitations to Claim 20. The remarks made above in support of patentability of Claim 20 are also applicable to distinguish the corresponding apparatus and computer-usable medium claims, Claims 50 and 65, as well as dependent Claims 59 and 60.

Accordingly, Claims 29, 30, 50, 59, 60, and 65 should also be allowed.

Appln. No. Serial No. 09/583,219

Amdt. Dated 8/11/04

Second Response in Appln, Reply to Office Action of 2/12/2004

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CONCLUSION

The foregoing is submitted as a complete response to the Office Action identified above. This application should now be in condition for allowance, and the Applicants solicit a notice to that effect. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brenda O. Holmes". The signature is fluid and cursive, with the first name "Brenda" being more prominent than the last name "Holmes".

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